

541432

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
26 August 2004 (26.08.2004)

PCT

(10) International Publication Number  
WO 2004/071650 A1

(51) International Patent Classification<sup>7</sup>: B01J 8/00, 19/00

[IT/CH]; Strada di Gandria 73, CH-6976 Castagnola (CH).  
RIZZI, Enrico [IT/IT]; Via Montale, 10, I-22070 Grandate  
(CO) (IT). TAROZZO, Mirco [IT/CH]; Via L. Piffaretti  
20D, CH-6853 Ligornetto (CH).

(21) International Application Number:

PCT/EP2004/000233

(22) International Filing Date: 15 January 2004 (15.01.2004)

(74) Agent: ZARDI, Marco; M. Zardi & CO. S.A., Via Pioda,  
6, CH-6900 Lugano (CH).

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

03003573.7 17 February 2003 (17.02.2003) EP

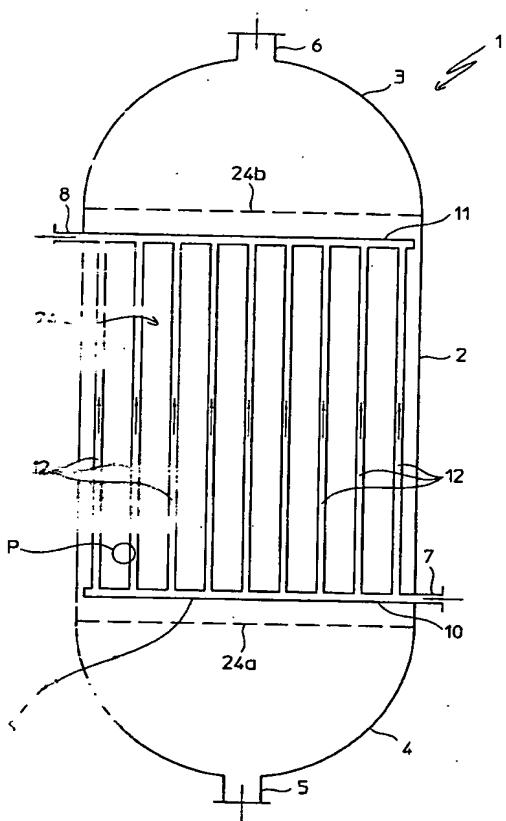
(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

(71) Applicant (for all designated States except US):  
METHANOL CASALE S.A. [CH/CH]; Via Giulio  
Pocobelli, 6, CH-6900 Lugano-Besso (CH).

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: METHOD FOR CARRYING OUT CHEMICAL REACTIONS IN PSEUDO-ISOTHERMAL CONDITIONS



(57) Abstract: Method for controlling the reaction temperature in a catalytic bed (24) of a reactor (1) in which a chemical reaction takes place in pseudo-isothermal conditions by means of at least one heat exchanger (12), crossed by a respective operating fluid, immersed in the catalytic bed (24).

WO 2004/071650 A1



GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*